REMARKS

The revision to the first paragraph of the Summary better reflects the scope of the invention.

Upon review of the previously amended set of claims, applicant noted inclusion of certain notes embedded within the claims. The new set of amended claims excludes these notes.

Because applicants made certain other changes in the amended claims, the new set of claims constitute an amendment to an amendment, which is being submitted as an entirely new set of revised claims showing amendments from the previously examined claims (as opposed to revisions to the previous amendment). Revisions from the previous amendments, however, appear in bold type should this be of interest to the examiner. New claims 29-57 also include changes over the previously set of new claims, but for the sake of convenient reference applicants show changes in the footnotes hereof.[1]

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[1] 29. (Amended) In a one-pulse, one-bit UWB transceiver system, a method of detecting transmitted information comprising:

generating a series of low-level UWB pulses of short duration,

modulating respective ones of said low-level UWB pulses according to respective bits of information,

bandpass filtering the low-level UWB pulses to reject out-of-band emissions,

radiating a filtered representation of said low-level UWB pulses, and

detecting at a receiver respective bits of information associated with ~~distinctive~~ **respective** ones of said UWB pulses. ~~(McEwan detects "overlapping" bursts, Fullerton '927 integrate 200 pulses to form an information bit.)~~

34. (Amended) The method of claim 31, wherein said [UWB pulses lack pulse-to-pulse coherency] **generating step includes generating said UWB pulses utilizing a digital signal processor**.

To the extent consistent with remarks of this paper, applicant adopts the previously submitted remarks. Many of the change are editorial in nature, some correcting errors in the previous set of claims. In explanation of the further amendments that appear in the new set of substitute claims, the "pulse shaping circuit" of claim 2 is shown as element 102 of Figs. 1 and 2. The "sequence of cycles" recited in claim 4 is shown as trace (d) of Fig. 5. The phrase "sequence of cycles" in claim 4 replaces "cycle periodicity" since the timing of pulses within a

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42. (Amended) The method of claim 35, wherein said oscillator comprises a voltage-controlled oscillator and said [modulating step] **method further** comprises frequency-shifting the voltage-controlled oscillator [according to an information signal].

43. (Amended) The method of claim 42, further comprising the step of frequency-hopping the oscillator **according to a frequency hopping pattern**.

50. (Amended) A method of communicating data by transmitting and detecting an ultra wideband pulse, said method comprising:

generating a low-level UWB pulse [that includes] **utilizing** an energy burst having a few cycles of RF energy [of a defined carrier frequency] **to establish a predetermined bandwidth**,

filtering the energy burst to reject out-of-band emissions,

radiating a filtered representation of said energy burst,

after said radiating step, detecting a bit of data associated with a filtered representation of said energy burst.

51. (Amended) The method of claim 50, wherein said [filtering step includes wave filtering said energy burst to reject out-of-band emissions] **generating step includes utilizing a digital signal processor to produce said low-level UWB pulse**.

52. (Amended) The method of claim 50, wherein said generating step includes [on-off switching of] **gating** an oscillator to produce said energy burst.

53. (Amended) The method of claim 50, wherein said generating step includes [impulse-driving a mixer which, in turn, gates] **waveform adapting** an output of an oscillator to produce said [energy burst] **UWB pulse**.

56. (Amended) A method of transmitting an ultra wideband pulse, said method comprising:

generating a low-level UWB pulse that includes an energy burst having a few cycles of RF energy ~~at a defined carrier frequency~~,

wave filtering the energy burst to reject out-of-band emissions, and

radiating a filtered representation of said energy burst.

signal burst need not be periodic. Use of a "digital signal processor," as now recited in claims 34 and 51 is supported at page 31, line 30 through page 32, line 1.

In response to the Office Action mailed December 31, 2003, applicant respectfully request examination of the attached set of claims along with the remarks submitted March 5, 2004.

Respectfully submitted,
McINTYRE HARBIN & KING

Lawrence Harbin, Reg. No. 27,644
500 Ninth Street, S.E.
Washington, DC 20003
202.546.1100 tel. 202.543-9230 fax